

Applied Technology Council Overview

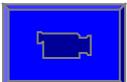


28 April 2004

Patrick Gould
Air Force Research Laboratory



Overview

- **Air Force Research Laboratory**
 - **Video** 
- **Applied Technology Councils**
 - **The Challenge and Solution**
 - **Advanced Technology Demonstrations**
 - **Two Examples**
 - **ATC Results**



Air Force Research Laboratory



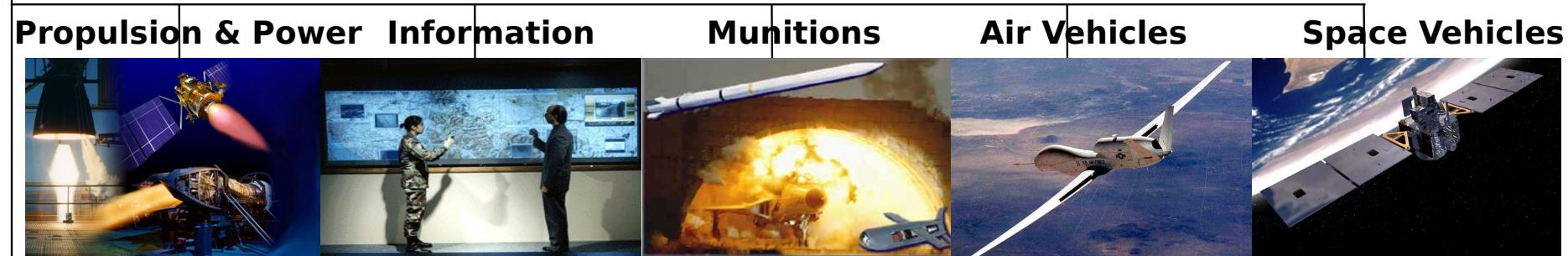
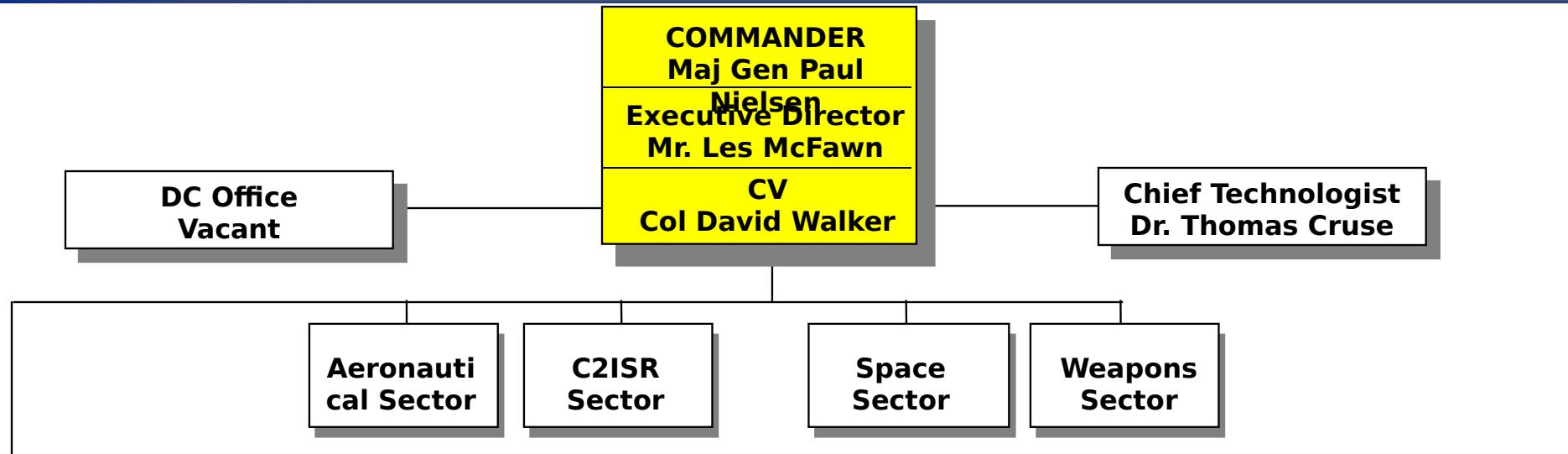
***From
many
labs and
staffs***



***...To the Air Force's
Single Laboratory***



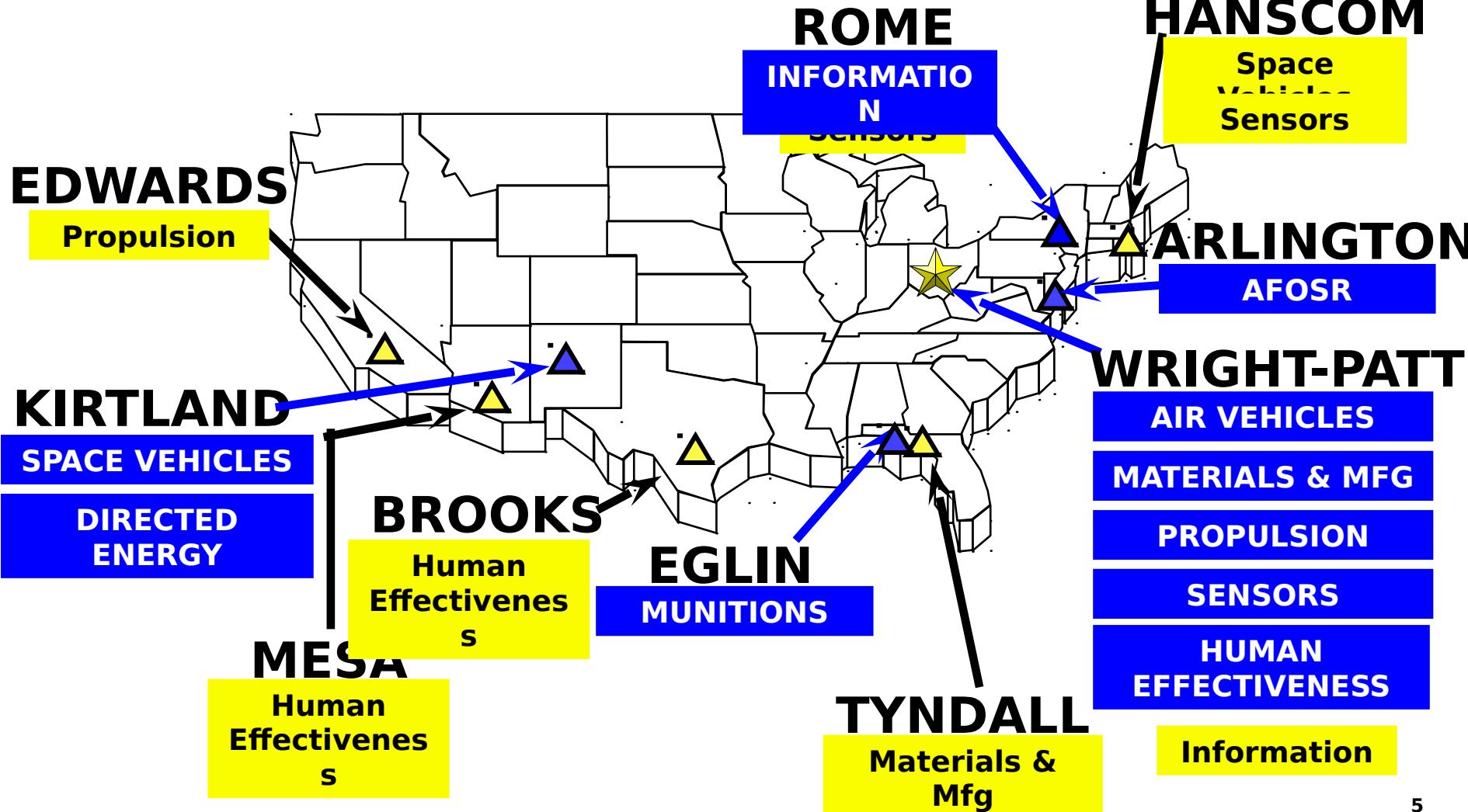
Air Force Research Laboratory Organization Structure



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AFRL Research Sites

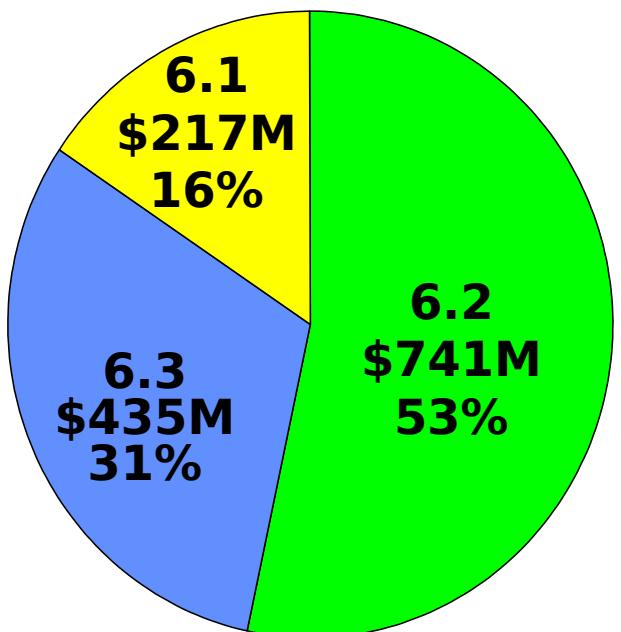




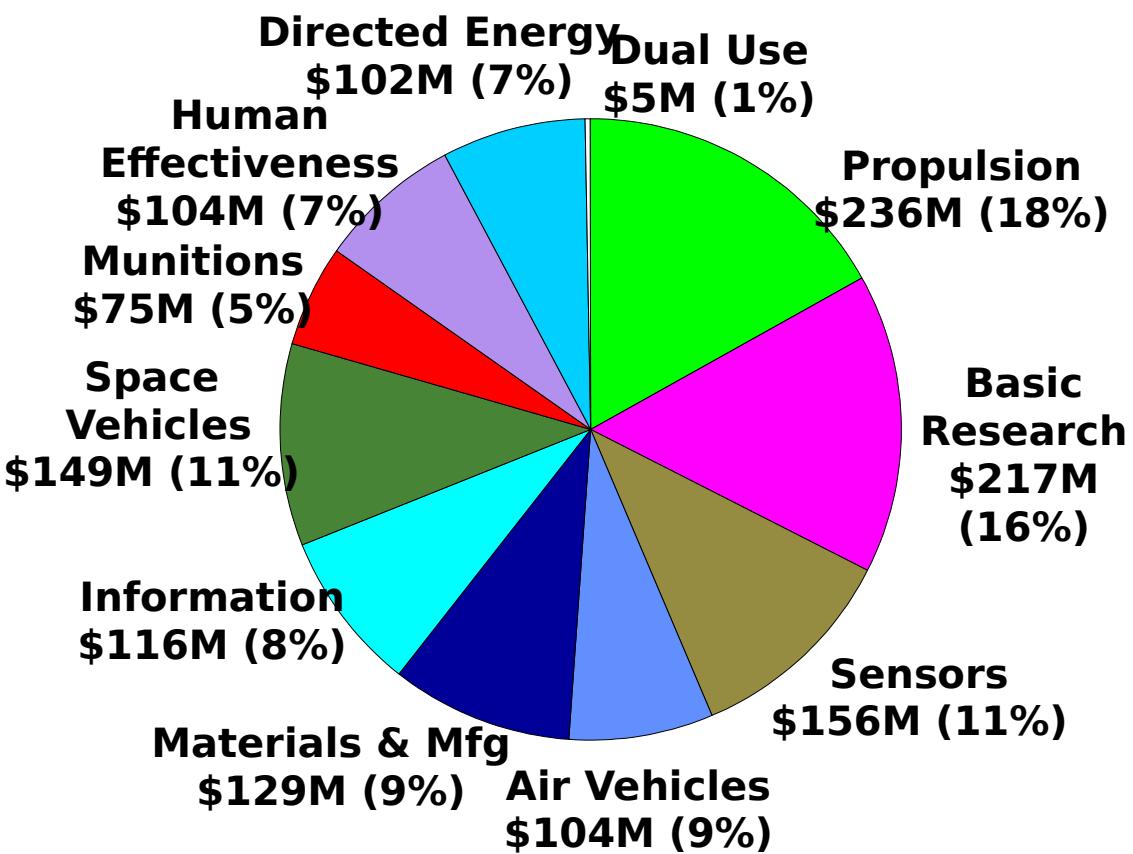
FY05 President's Budget AF S&T Budget



By
Budget Activity



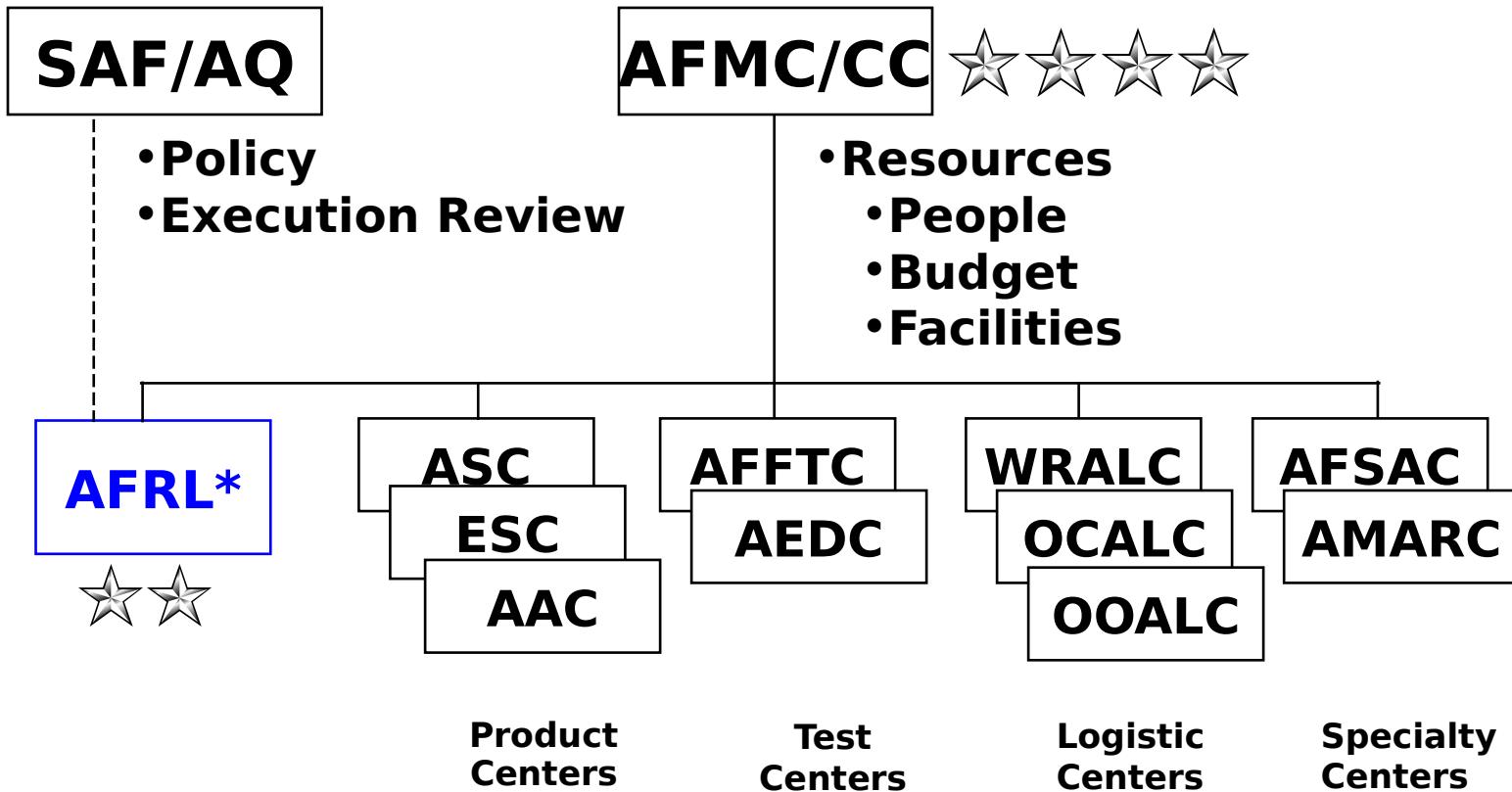
By
Directorate/Tech Area



TOTAL: \$1.393 Billion



Air Force Research Laboratory



*AFRL/CC is dual-hatted as TEO reporting to
Secretary of the Air Force for Acquisition
(SAF/AQ)



Operating Tenets

- **Outsource majority of research/tech development to industry and academia**
- **Perform focused in-house research to maintain core expertise and be a smart outsourcer**
- **Balance near term transition and far term research**
- **Collaborate/coordinate with others**
 - **DoD: Army, Navy, DARPA, DTRA, BMDO, NRO**
 - **Other federal agencies: NASA, DOE, others**
 - **Private sector**
 - **International**



Technology has been the cornerstone of the Air Force's military successes in the last fifty years



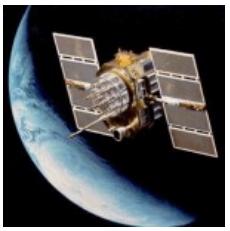
**Low
Observables**



**Global
Communications**



**Smart
Munitions**



**Precision
Navigation**



**Airborne
Command And
Control**



**Battlefield
Management**

**Operation
Allied Force**



**Products
of War**



AFRL Supports Major Programs





Overview

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 - Two Examples
 - ATC Results

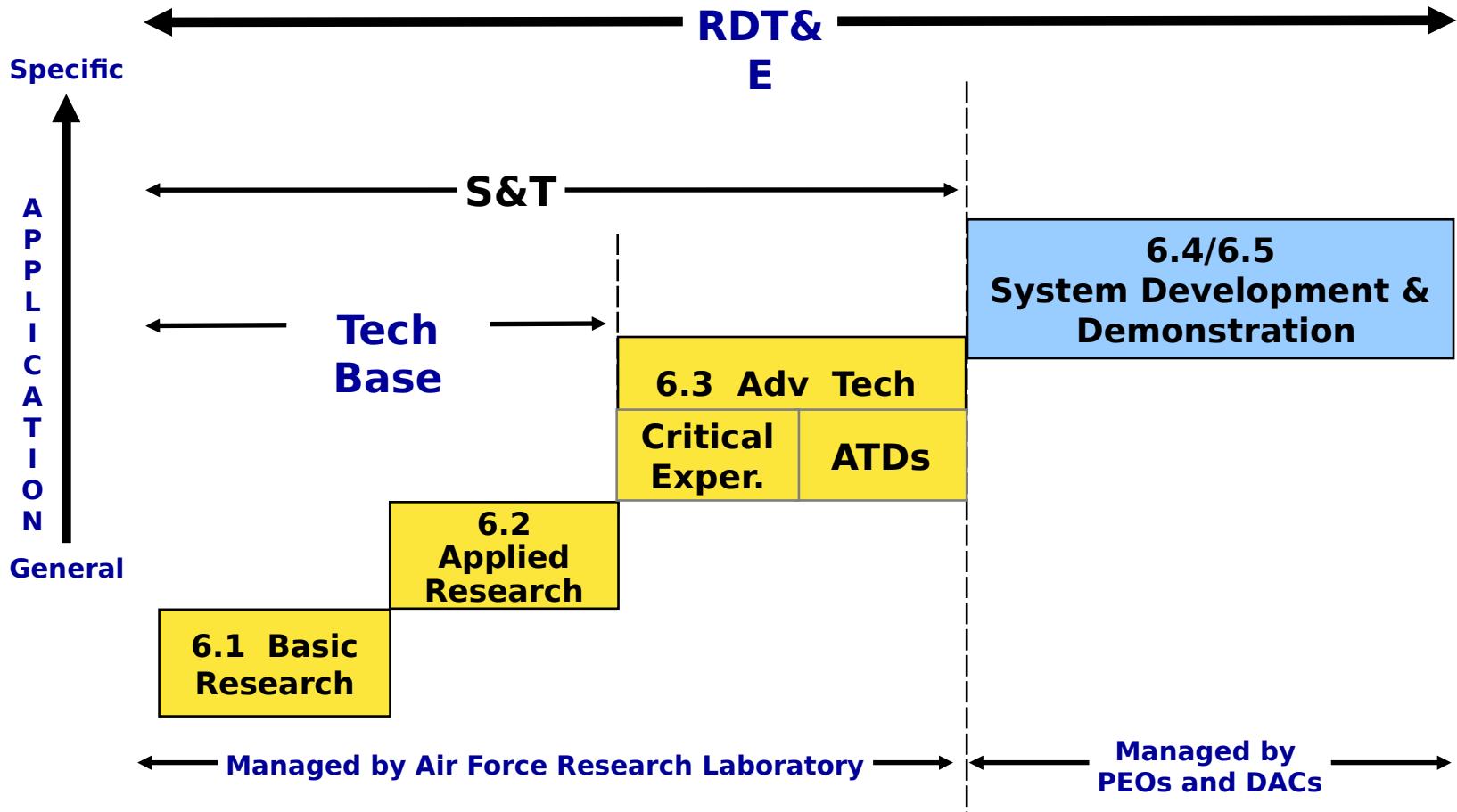


Our Challenge

- **Tech Transition Problem Surfaced at Quarterly Acquisition Program Reviews (QAPRs)**
 - **Funding Disconnect Between S&T (Funded) and Transition Programs (Largely Unfunded)**
- **Applied Technology Councils (ATCs) Proposed As a Solution**



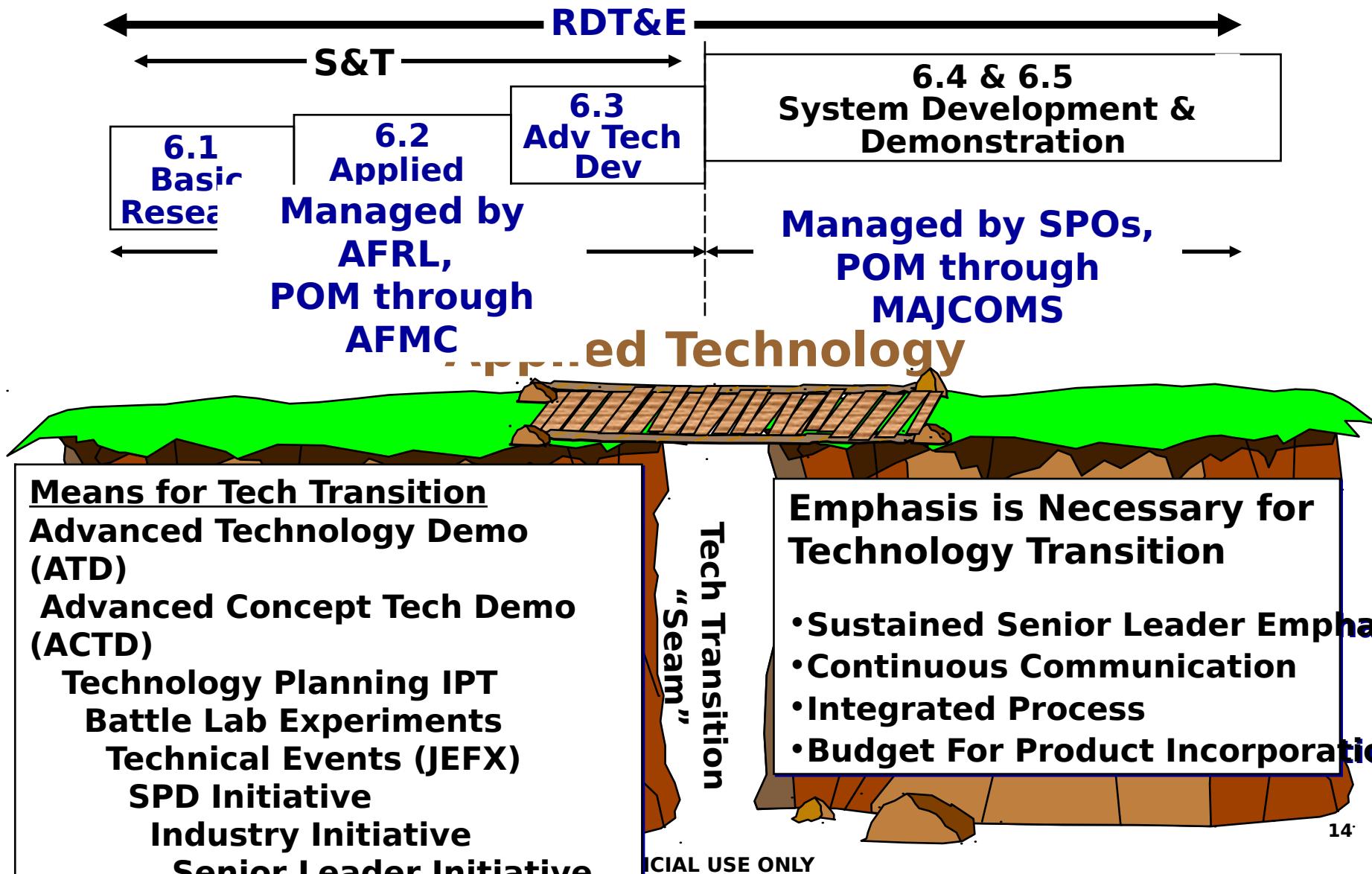
Major Force Program 6 Relationship (3600 Appropriation)



6.3 a & b funding was abolished in 1992

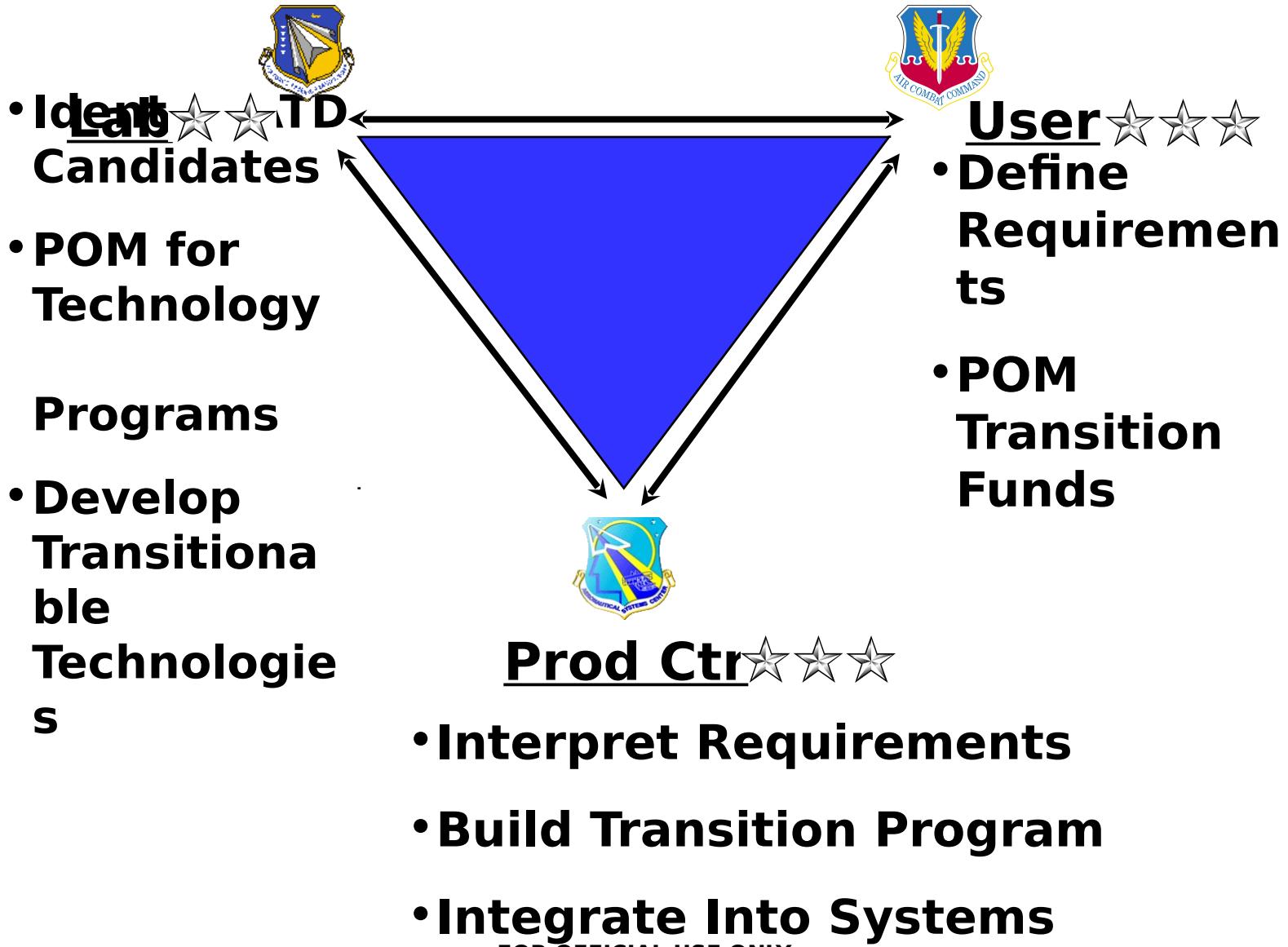


Applied Technology Councils Focus S&T Investment





The ATC Triangle





Desired Outcome of the ATC Process



- Increase Probability of Timely Tech Transition
 - Lab: Goal - 50% of S&T 6.3 Budget in ATDs
 - Warfighter: No ATD Commissioned w/o Budget

Commitment to Transition

- SPO: Build and Implement Successful Transition

Program

- Build Greater Understanding of “Realm of the Successful Tech Transition is the End Game”



ATD Candidates

- **What is an ATD Candidate for an Applied Technology Council?**
 - Any Funded 6.3 Program* That Is Projected to Demonstrate an Integrated Set of Technologies That Will

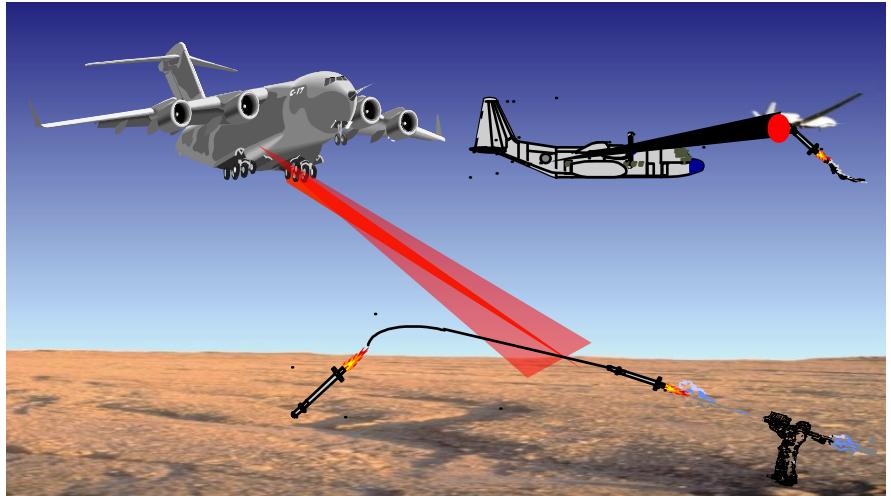
- **Enable an Improved Warfighting Capability/System, and**
- **Be Ready to Transition Within the FYDP**

*** Programs can include 6.2 and 7.8 (ManTech) Funds**

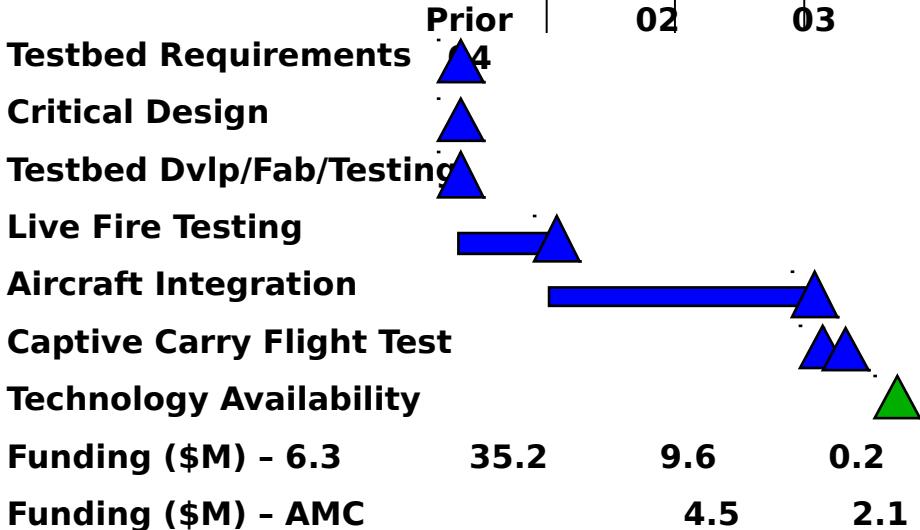


Laser Infrared Flyout Experiment (LIFE)

AFRL/SN



Technology Investment Schedule (FY) As of 13



Description	Benefits to the War Fighter		
<ul style="list-style-type: none"> Threat adaptable deceptive jamming of inbound IR missiles Proof of concept live fire and flight test Affordability pilot program - lower risk 	<ul style="list-style-type: none"> Threat adaptable jamming defeats both known & new IR threats, including those with flare CMs Provides missile launch detection out to maximum range of the missile with few false alarms Mini-head turret minimizes size/weight/power 		
Technology	<ul style="list-style-type: none"> Closed loop jamming with multi-band lasers, mini-turrets, and two color IR missile warning Analysis of mini-turret option for EMD 		
	<small>FOR OFFICIAL USE ONLY</small>		



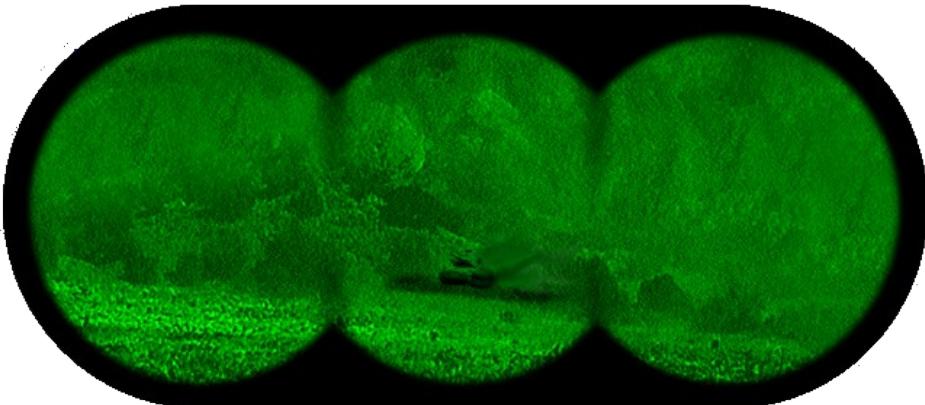
Laser Infrared Flyout Experiment (LIFE) Cable Car Demonstration



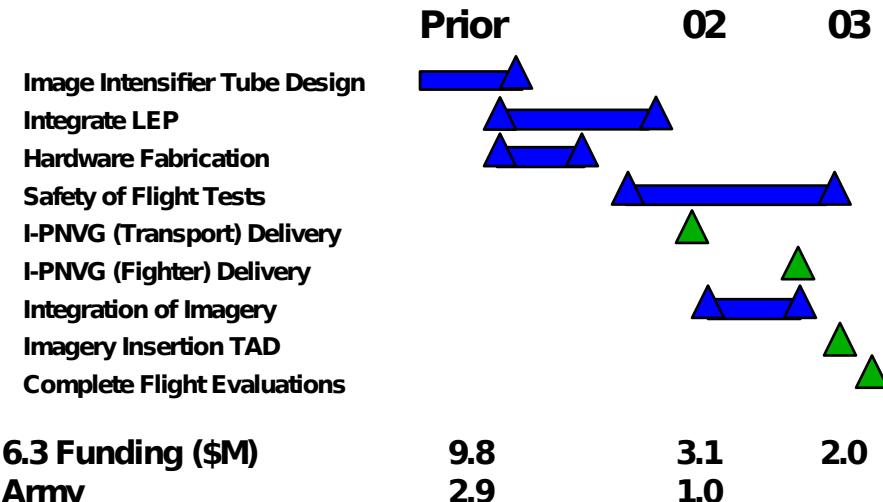


Integrated Panoramic Night Vision Goggle (IPNNG)

AFRL/HE/ML



Technology Investment Schedule (FY) As of: 20 Aug 02



Description

- Develop integrated technology leveraged from panoramic night vision goggle and aircrew laser eye protection technologies
- Technologies compatible with J HMCS design

Technology

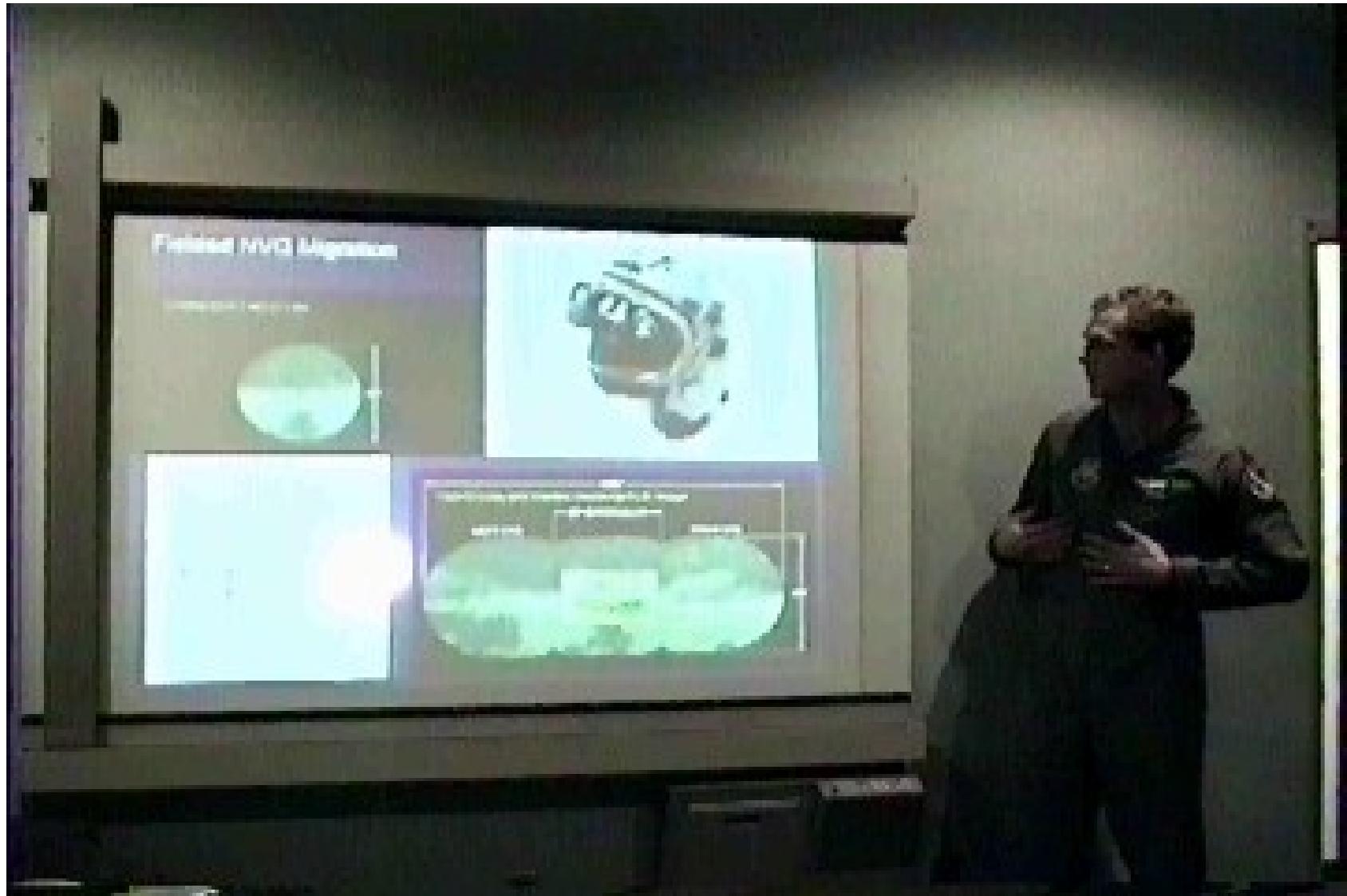
- Ultra-Wide Field-of-View (95° Horizontal)
- Low Profile with Improved Center-of-Gravity
- High Performance Laser Filters
- Integration of Imagery Display

Benefits to the Warfighter

- Dramatic increase in viewing area providing unsurpassed situational awareness
- Protection from lasers (self and threats)
- Goggle retained after ejection for escape & evasion
- Improved navigation, targeting, weapons delivery, and search and rescue at night
- Capable to display imagery and symbology
- Allow advanced tactics at night



Integrated Panoramic Night Vision Goggle (IPNVG) Flight Test Debrief



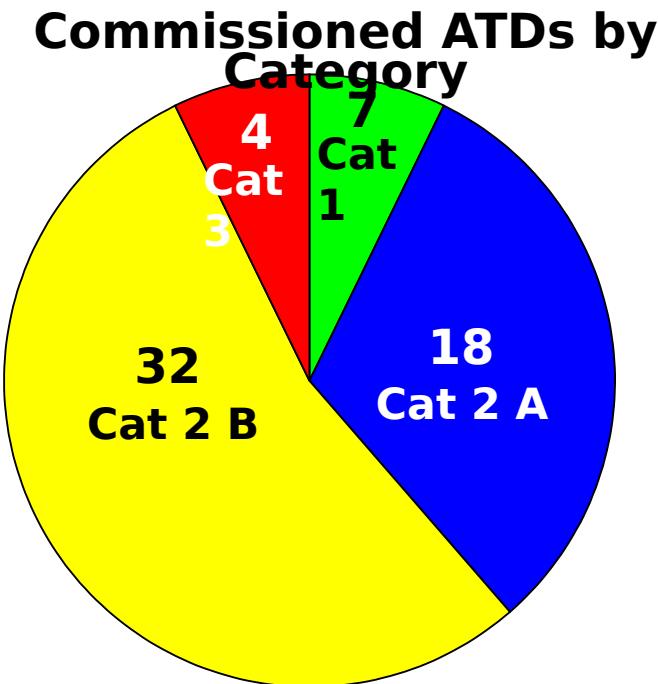
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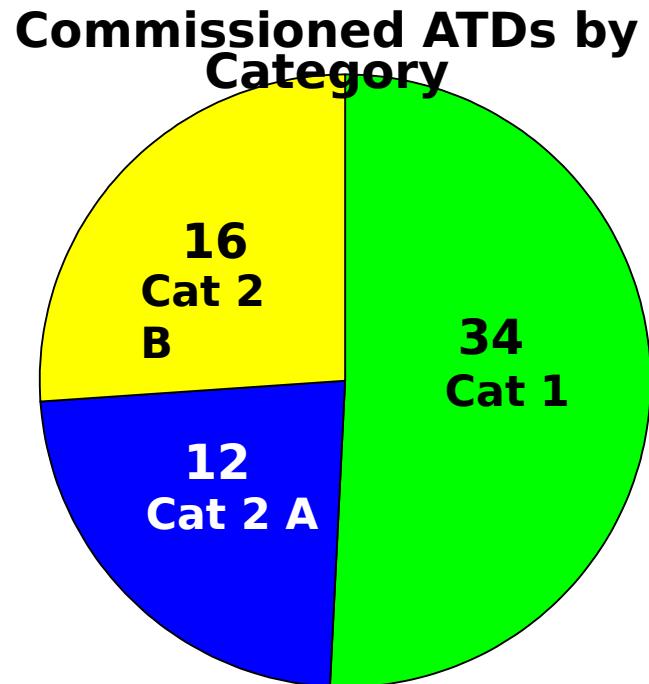
ATC Results Round 1 vs. Current



Round 1 (Spring '00)



Current



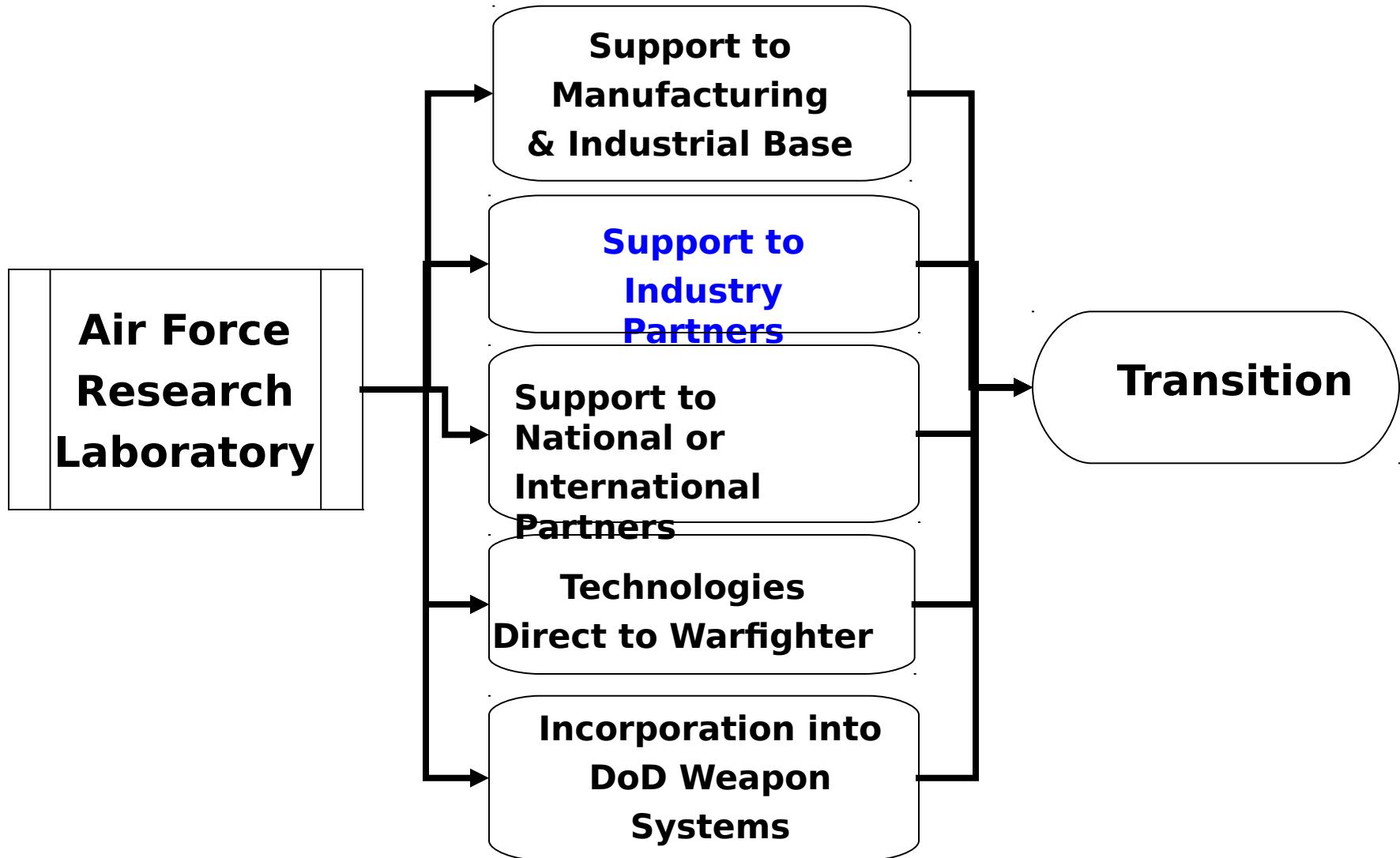
- 57 ATDs Commissioned
- 12% (7 / 57) w/ MAJCOM Transition Funds
- AFRL Funding Com → 18% of 6.3 Funds
 - \$87.1M FY00
 - \$530.5M FY00-07

- 62 ATDs Commissioned
- 55% (34/62) w/ MAJCOM Transition Funds
- AFRL Funding Com → 50 % of 6.3 Funds
 - \$225.8M FY03
 - \$628.5M FY03-09

As of Jan 03



Other Technology Transition Paths





Summary

- AFRL committed to timely tech transition
 - ATC's are a prime forum
- Many successful technology transition paths other than the ATC process

Successful Tech Transition is the End Game



Closing Thought



**AFRL unleashing the power
of innovative air and space technology!**





**QUESTIONS
?**



Reference Charts





Technology Readiness Assessment



System Development & Demonstration

Technology Demonstration

Technology Development

Research to Prove Feasibility

Basic Tech. Research

